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EXAMINER

HAWKINS, CHERYL N

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/792,343

Applicant(s)

TOMINAGA, MITSUHIRO

Examiner

Cheryl N Hawkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 12 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/7/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 12 is objected to because of the following informalities: "roughed" in line 3 of the claim should be changed to --roughened--. Appropriate correction is required.
2. Claim 15 is objected to because of the following informalities: "claim 13" in line 1 of the claim should be changed to --claim 13,--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 recites the limitation "the entire inner surface" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, it will be assumed that "the entire inner surface" refers to the --the entire interior surface--.
5. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 recites the limitation "the non-stick material" in line 1 of the claim.

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There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, it will be assumed that Claim 15 is dependent upon Claim 14, which would provide the limitation "the non-stick material" with proper antecedent basis.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 4, 10-13, 16-19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) in view of Fischer (US 4,704,185). Nose et al. discloses a transfer tool comprising a housing (Figure 2, casing C, case members C1 and C2) having an interior surface; and ribbon substrate (Figure 1, film transfer ribbon R) that travels inside the housing, the ribbon substrate being coated with a coating film to be transferred from the ribbon substrate (column 10, lines 23-27). Nose et al. does not disclose a transfer tool wherein the interior surface of the housing is roughened at least in a region wherein the coating film on the ribbon substrate may contact the interior surface of the housing. Fischer discloses a transfer tool wherein the interior surface of the housing is roughened at least in a region wherein adhesive elements on a carrier tape may contact the interior surface of the housing (Figure 3, ribs 32; column 4, lines 10-12). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the transfer tool of Nose et al. to include roughening the interior

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surface of the housing as suggested by Fischer to prevent the coating film from adhering to the interior surface of the housing.

As to Claim 2, the references as combined (see Nose et al.) disclose a transfer tool wherein the ribbon substrate is a tape (see Figure 1, film transfer ribbon R).

As to Claim 4, the references as combined (see Fischer) disclose a transfer tool wherein the roughened surface is formed of multiple projections (Figure 3, ribs 32).

As to Claim 10, the references as combined are silent as to a transfer tool wherein the entire inner surface of the housing has a roughened surface. When modifying the transfer tool of Nose et al. as noted above to include roughening the interior surface of the housing to prevent the coating film from adhering to the interior surface of the housing, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the housing of Nose et al. to include a roughened surface on its entire inner surface to minimize the possibility of having the coating film undesirably adhere to any portion of the housing's interior.

As to Claim 11, the references as combined (see Fischer) disclose a transfer tool wherein the housing has a roughened surface (Figure 3, ribs 32) along a path where the ribbon substrate (Figure 6, carrier tape 16) travels inside the housing

As to Claim 12, the references as combined (see Fischer) disclose a transfer tool further comprising a dispenser at which the coating film is dispensed from the ribbon substrate, wherein the roughened surface is provided on an upstream side of the dispenser (Figure 3, ribs 32).

As to Claim 13, the references as combined (see Nose et al.) disclose a transfer tool wherein the housing is formed integrally in an injection-molding process (column 19, lines 41-43). When modifying the transfer tool of Nose et al. as noted above to include a roughened

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surface, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the roughened inner surfaces integrally with the housing during the injection-molding process.

As to Claim 16, the references as combined (see Fischer) disclose a transfer tool wherein the projections are formed in a repetition of a predetermined pattern (Figure 3, ribs 32). In any event, it would have been readily apparent to one of ordinary skill in the art at the time of the invention to select the shape of the projections to form a variety of patterns as an aesthetic design choice.

As to Claim 17, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is a correction film (column 21, lines 53-54).

As to Claim 18, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is an adhesive film (column 10, lines 23-27).

As to Claim 19, the references as combined (see Nose et al.) disclose a transfer tool wherein the ribbon substrate is formed mainly of polyethylene (column 14, lines 30-32) and has a thickness of about 25 μm (column 10, lines 23-24).

As to Claim 22, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is about 20 μm in thickness (column 10, lines 25-26).

8. Claims 1, 2, 4-11, 13, 16-19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) in view of Mendelovich et al. (US 5,735,999). Nose et al. discloses a transfer tool comprising a housing (Figure 2, casing C, case members C1 and C2) having an interior surface; and ribbon substrate (Figure 1, film transfer ribbon R) that

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travels inside the housing, the ribbon substrate being coated with a coating film to be transferred from the ribbon substrate (column 10, lines 23-27). Nose et al. does not disclose a transfer tool wherein the interior surface of the housing is roughened at least in a region wherein the coating film on the ribbon substrate may contact the interior surface of the housing. Mendelovich et al. discloses a tape dispenser wherein the interior surface of the housing is roughened at least in a region wherein an adhesive tape may contact the interior surface of the housing (Figure 3b, bar members 66; column 5, lines 7-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the transfer tool of Nose et al. to include roughening the interior surface of the housing as suggested by Mendelovich et al. to prevent the coating film from adhering to the interior surface of the housing.

As to Claim 2, the references as combined (see Nose et al.) disclose a transfer tool wherein the ribbon substrate is a tape (see Figure 1, film transfer ribbon R).

As to Claim 4, the references as combined (see Mendelovich et al.) disclose a transfer tool wherein the roughened surface is formed of multiple projections (Figure 3b, bar members 66).

As to Claims 5, 6, 7, 8, and 9, the references as combined (see Mendelovich et al.) disclose the advantages of fabricating projections with a relatively small surface area to maximize the resistance of the roughened surface to adhesion of an adhesive substrate (column 5, lines 7-15), but are silent as to specific values for the center line average height of the projections, the ratio of a pitch to a height of the projections, the tapered angle of the tip of each projection, the cut level of the projections, and the load length ratio at a cut level of 20%. It would have been obvious to one of ordinary skill in the art at the time of the invention to use

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routine experimentation to determine the optimal value of each of the aforementioned characteristics of the projections to maximize the resistance of the roughened surface to adhesion of the coating film. It is noted that where general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.

In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

As to Claim 10, the references as combined are silent as to a transfer tool wherein the entire inner surface of the housing has a roughened surface. When modifying the transfer tool of Nose et al. as noted above to include roughening the interior surface of the housing to prevent the coating film from adhering to the interior surface of the housing, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the housing of Nose et al. to include a roughened surface on its entire inner surface to minimize the possibility of having the coating film undesirably adhere to any portion of the housing's interior.

As to Claim 11, the references as combined (see Mendelovich et al.) disclose a transfer tool wherein the housing has a roughened surface (Figure 7, bar members 66) along a path where the ribbon substrate (Figure 7, adhesive tape 98) travels inside the housing.

As to Claim 13, the references as combined (see Nose et al.) disclose a transfer tool wherein the housing is formed integrally in an injection-molding process (column 19, lines 41-43). When modifying the transfer tool of Nose et al. as noted above to include a roughened surface, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the roughened inner surfaces integrally with the housing during the injection-molding process.

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As to Claim 16, the references as combined (see Mendelovich et al.) disclose a transfer tool wherein the projections are formed in a repetition of a predetermined pattern (Figure 3b, bar members 66). In any event, Mendelovich et al. discloses that the projections may have any shape (column 5, lines 2-3). Therefore, it would have been readily apparent to one of ordinary skill in the art at the time of the invention to select the shape of the projections to form a variety of patterns as an aesthetic design choice.

As to Claim 17, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is a correction film (column 21, lines 53-54).

As to Claim 18, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is an adhesive film (column 10, lines 23-27).

As to Claim 19, the references as combined (see Nose et al.) disclose a transfer tool wherein the ribbon substrate is formed mainly of polyethylene (column 14, lines 30-32) and has a thickness of about 25 μm (column 10, lines 23-24).

As to Claim 22, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is about 20 μm in thickness (column 10, lines 25-26).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) and Fischer (US 4,704,185) or Mendelovich et al. (US 5,735,999) as applied to claim 1 above, and further in view of the admitted prior art. The references as combined do not disclose a transfer tool wherein at least the roughened surface of the housing contains a non-stick material. The admitted prior art discloses a transfer tool wherein a surface of the housing contains a non-stick material (page 2 of the specification, paragraph 8). When modifying the

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inner surfaces of the housing as noted above to be resistant to the undesired adhesion of the coating film, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the roughened surface of the housing of the references as combined to contain a non-stick material as suggested by the admitted prior art to provide the interior surface of the housing with additional resistance to the undesired adhesion of the coating film.

10. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) and Fischer (US 4,704,185) or Mendelovich et al. (US 5,735,999) as applied to claim 1 above, and further in view of the admitted prior art and Bannon et al. (US 2,403,964). As to Claim 14, the references as combined do not disclose a transfer tool wherein at least the roughened surface of the housing contains a non-stick material. The admitted prior art discloses a transfer tool wherein a surface of the housing contains a non-stick material (page 2 of the specification, paragraph 8). When modifying the inner surfaces of the housing as noted above to be resistant to the undesired adhesion of the coating film, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the housing and the roughened inner surface of the references as combined to contain a non-stick material as suggested by the admitted prior art to provide the interior surface of the housing with additional resistance to the undesired adhesion of the coating film.

As to Claim 15, the references as combined do not disclose a transfer tool wherein the non-stick material is selected from a group comprising magnesium stearate, zinc stearate, aluminum stearate, and calcium stearate. Bannon et al. discloses a surface coating for packages which includes zinc stearate for controlling and reducing the cohesive tendency of the material

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being transported from adhering to its container (column 2, lines 28-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the housing and the interior surface of the references as combined to include zinc stearate, as suggested by Bannon et al. to reduce and control the cohesive tendency of the coating film from adhering to the housing or the roughened surface.

As to Claim 14, the references as combined are silent as to a transfer tool wherein the housing and the roughened inner surface are formed of a material comprising a non-stick material in an amount of 0.3 to 0.8% of material weight. It would have been obvious to one of ordinary skill in the art at the time of the invention to determine the optimal weight percentage of the non-stick material in the composition of the housing and its interior surfaces to maximize the resistance of the housing and the roughened surface to adhesion of the coating film. It is noted that where general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) and Fischer (US 4,704,185) or Mendelovich et al. (US 5,735,999) as applied to claim 1 above, and further in view of Van Hoof et al. (US 3,936,571). The references as combined do not disclose a transfer tool wherein the ribbon substrate is processed for both surfaces to exhibit releasability. It is well known and conventional in the tape dispenser art, as disclosed by Van Hoof et al. (column 3, lines 41-48), to coat one or both sides of a liner carrying an adhesive tape with an anti-adhesion agent to prevent adjacent convolutions of the adhesive tape roll from

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bonding together, as well as for handling adhesive tapes which have an adhesive layer on both sides. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ribbon substrate of the references as combined to have both surfaces coated with an anti-adhesion agent as suggested by Van Hoof et al.; coating both sides of a release liner being well established in the art for preventing adjacent convolutions of an adhesive tape roll from bonding together.

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) and Fischer (US 4,704,185) or Mendelovich et al. (US 5,735,999) as applied to claim 18 above, and further in view of Yamashita (US 2004/0180196). The references as combined are silent as to the composition of the coating film. Yamashita discloses a transfer tape comprising an emulsion-type acrylic adhesive, a rosin-type tackifier, a phthalocyanine blue colorant, crawling inhibitor, and water, which maintains strong adhesive strength but can be reliably cut at a stipulated position (abstract; page 3, paragraphs 36-42). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coating film of the references as combined to include an emulsion-type acrylic adhesive, a rosin-type tackifier, a phthalocyanine blue colorant, crawling inhibitor, and water as suggested by Yamashita to provide a transfer tape which maintains strong adhesive strength but can be reliably cut at a stipulated position.

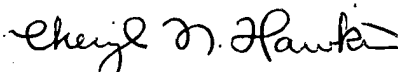
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Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl N Hawkins whose telephone number is (571) 272-1229. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher A Fiorilla can be reached on (517) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 12/22/04
Cheryl N. Hawkins
December 22, 2004


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Au 1734